

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
10 March 2005 (10.03.2005)

PCT

(10) International Publication Number
WO 2005/021425 A1

(51) International Patent Classification⁷: C01B 13/20,
C01F 17/00, C01G 45/02, C01F 7/16, C01G 15/00, 23/00,
25/00, 35/00, C01B 35/12, 33/20

Tomofumi [JP/JP]; c/o Kawasaki Plant Showa Denko
K.K., 2-3, Chidori-cho, Kawasaki-ku, Kawasaki-shi,
Kanagawa 2100865 (JP).

(21) International Application Number:
PCT/JP2004/011641

(74) Agent: SUZUKI, Shunichiro; S.Suzuki & Associates
Gotanda Yamazaki Bldg. 6F, 13-6, Nishigotanda 7-chome,
Shinagawa-ku, Tokyo 1410031 (JP).

(22) International Filing Date: 6 August 2004 (06.08.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2003-309092 1 September 2003 (01.09.2003) JP
60/567,011 3 May 2004 (03.05.2004) US

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(71) Applicant (for all designated States except US): SHOWA
DENKO K.K. [JP/JP]; 13-9, Shibadaimon 1-chome, Mi-
nato-ku, Tokyo 1058518 (JP).

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

(72) Inventors; and

(75) Inventors/Applicants (for US only): TANI, Takashi
[JP/JP]; c/o Kawasaki Plant Showa Denko K.K., 2-3,
Chidori-cho, Kawasaki-ku, Kawasaki-shi, Kanagawa
2100865 (JP). SAITO, Makoto [JP/JP]; c/o Kawasaki
Plant Showa Denko K.K., 2-3, Chidori-cho, Kawasaki-ku,
Kawasaki-shi, Kanagawa 2100865 (JP). UEDA, Takashi
[JP/JP]; c/o Kawasaki Plant Showa Denko K.K., 2-3, Chi-
dori-cho, Kawasaki-ku, Kawasaki-shi, Kanagawa 2100865
(JP). NAKAMURA, Keiichi [JP/JP]; c/o Kawasaki Plant
Showa Denko K.K., 2-3, Chidori-cho, Kawasaki-ku,
Kawasaki-shi, Kanagawa 2100865 (JP). NISHIMURA,

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: PROCESS FOR PRODUCING FINE METAL OXIDE PARTICLES

(57) Abstract: The present invention provides a process for producing fine metal oxide particles efficiently and simply. The process for producing fine metal oxide particles of the present invention comprises subjecting a gaseous organometallic compound to combustion in a gas phase in the presence of an oxidizing substance; mixing a gaseous organometallic compound with an oxidizing substance to prepare a mixture and subjecting the mixture to combustion; mixing an organometallic compound solution with an oxidizing substance to prepare a mixture making the mixture into a gaseous state and then subjecting the gaseous mixture to combustion; or mixing an oxidizing substance with a gaseous organometallic compound prepared by vaporizing an organometallic compound solution to prepare a mixture and subjecting the mixture to combustion.